

The genus *Alphitobius* Stephens (Coleoptera, Tenebrionidae, Alphitobiini) in Africa and adjacent islands

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Abstract

All species of the genus *Alphitobius* Stephens, 1829 (Alphitobiini Reitter, 1917, subfamily Tenebrioninae Latreille, 1802) from Africa and adjacent islands are revised. New species: *Alphitobius capitaneus* **sp. n.** from Kenya. New synonyms: *Cryptops ulomoides* Solier, 1851, **syn. n.** of *Alphitobius diaperinus* (Panzer, 1796); *Alphitobius rufus* Ardoin, 1976, **syn. n.** of *Alphitobius hobohmi* Koch, 1953; *Peltoides* (*Micropeltoides*) *crypticoides* Pic, 1916, **syn. n.** of *Peltoides* (*Micropeltoides*) *opacus* (Gerstaecker, 1871), **comb. n.** Homonym: *Alphitobius ulomoides* Koch, 1953 = *Alphitobius arnoldi* **nom. n.** New combinations from *Alphitobius*: *Ulomoides basilewskyi* (Ardoin, 1969), **comb. n.**; *Peltoides* (*Micropeltoides*) *opacus* (Gerstaecker, 1871), **comb. n.** Figures of all examined species are added and a species key is compiled.

Keywords

Tenebrionidae, Alphitobiini, *Alphitobius*, taxonomy, new species, new synonym, new combination, Africa, species key

Introduction

Two species of the genus *Alphitobius* Stephens, 1829 (Alphitobiini Reitter, 1917, subfamily Tenebrioninae Latreille, 1802), namely *A. diaperinus* (Panzer, 1796) and *A. laevigatus* (Fabricius, 1781), have a cosmopolitan synanthropic distribution. All the other species were described from mature habitats in Africa south of the Sahara, so probably this is also the native area of both synanthropic species. Gebien (1921) presented the first key of the African species, including species of the genus *Diaclina* Jacquelin du Val, 1861. Additional species were added by Koch (1953), Ardoin (1958, 1963a, 1969, 1976), Ferrer (1983), and Bremer (1985). The goal of the present paper is a taxonomic revision of the African species, including the description of a new species, the recognition of new synonymies, a new name for a homonym, the transfer of two species from *Alphitobius* to *Ulomoides* and *Peltoides* respectively, providing also figures of all examined species, and compiling of a species key as well. Unfortunately, two taxa (*A. grandis* Fairmaire, 1897 and *A. limbalis* Fairmaire, 1901) from Madagascar remained unknown to the authors.

The separation of *Alphitobius* from *Diaclina* was doubtful for a long time. Gebien (1921) separated both by the width of the genal canthus (wider than eyes in *Alphitobius*, narrower or as wide as eyes in *Diaclina*). However, some taxa described under *Alphitobius* have the canthus not broader than eyes (for example *A. lamottei* Ardoin, 1963, see also in species key of Bremer and Girard 1996). Only recently, Matthews and Bouchard (2008) defined the Alphitobiini, separated this tribe from the Diaperini, and discussed also a few differences between *Alphitobius* and *Diaclina*.

Some additional taxa were originally described under *Alphitobius*, but were assigned in the meantime to other genera, and are therefore not included herein. *Ulomoides cinctellus* (Fairmaire, 1902) (Madagascar), *Diaclina parallela* (Thomson, 1858) (Guinea), *Micropedinus pullulus* (Boheman, 1858) (Hongkong), *Menimus nitidulus* (Motschulsky, 1859) (Sri Lanka), *Menimus punctulatus* (Motschulsky, 1859) (Sri Lanka), *Ulomoides suffusus* (Wollaston, 1867) (Cape Verde), *Uloma sulcipennis* (Thomson, 1858) (Gabon), and *Ulomoides xamiaphilus* (Carter, 1920) (Australia). *Alphitobius distinguendus* Fairmaire, 1869 turned out to be a synonym of *Cenoscelis pulla* (Erichson, 1843). Herein, we transfer one additional species from *Alphitobius* to *Ulomoides*: *U. basilewskyi* (Ardoin, 1969), comb. n., and one from *Alphitobius* to *Peltoides* (*Micropeltoides*): *P. opacus* (Gerstaecker, 1871), comb. n.

Depositories

CNC	Canadian National Collection of Insects, Ottawa, Canada
CRA	Collection Dr. Rolf Aalbu, Dorado Hills, USA/California
CRG	Collection Dr. Roland Grimm, Neuenbürg, Germany
MNB	Museum für Naturkunde, Berlin, Germany

MNHN	Muséum National d'Histoire Naturelle, Paris, France
MRAC	Musée Royal de l'Afrique Centrale, Tervuren, Belgium
NHMB	Naturhistorisches Museum, Basel, Switzerland
NMP	National Museum, Department Entomology, Prague, Czech Republic
SMNS	Staatliches Museum für Naturkunde, Stuttgart, Germany
TMSA	Ditsong National Museum of Natural History, Pretoria, South Africa
ZSM	Zoologische Staatssammlung, Munich, Germany

The African species of *Alphetobius*

Alphetobius acutangulus Gebien, 1921

http://species-id.net/wiki/Alphetobius_acutangulus

Figs 12, 18

Type specimens examined. Senegal, no further data, holotype NHMB (sex not examined).

New material. Sudan, Dilling, 20.–22.III.1914, leg. Ebner, 1 ex. NHMB. – Sudan, N Darfur Prov., El Geneina, 4.–18.VI.1979, leg. I. Abuzinid, 8 ex. TMSA, 1 ex. CRG, 1 ex. MNB, 1 ex. SMNS (det. Bremer). – Burkina Faso (labelled as Ob. Volta), Pundu, Olsufiew, no further data, 4 ex. TMSA. – Chad, Massaguet, without date, leg. H. Franz, 1 ex. NHMB. – Chad, Deressia, near Lai, without date, leg. H. Franz, 1 ex. NHMB.

Type locality. “Senegal”.

Distribution. Senegal (Gebien 1921, Koch 1953); Sudan (Bremer and Girard 1996); Burkina Faso, Chad (new records).

Alphetobius arnoldi nom. n.

Figs 4, 19

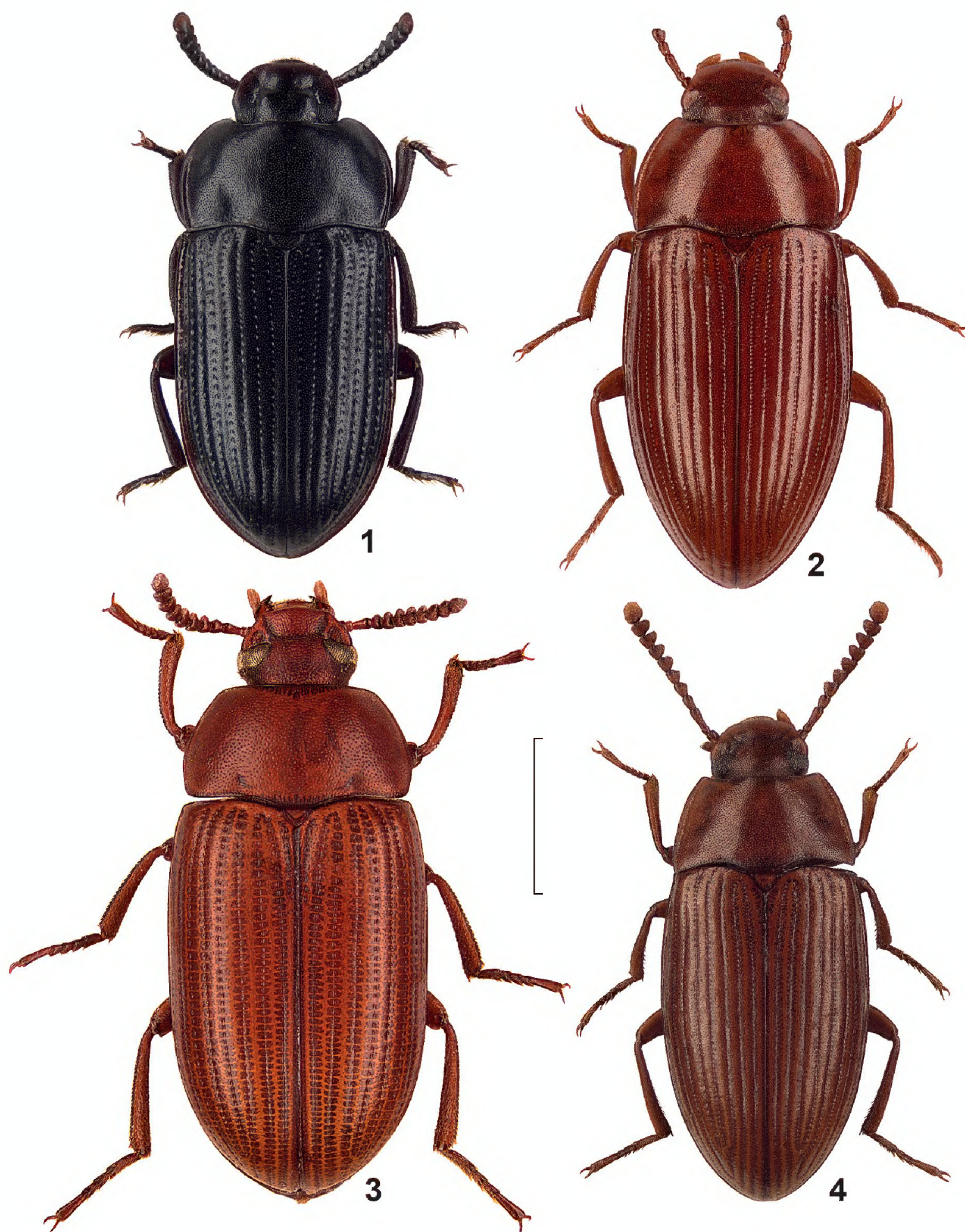
Alphetobius ulomoides Koch, 1953 (homonym, not *Cryptops ulomoides* Solier, 1851, syn. n.)

Type specimens examined. Zimbabwe (labelled as S Rhodesia), Bulawayo, leg. G. Arnold, holotype TMSA (sex not examined).

New material. Somalia, Car-Car Mts., IX.1959, leg. C. Koch, 2 ex. TMSA (det. Ferrer). – Somalia, Gardo, 810 m, 22.X.1957, leg. G. Scortecci, 1 ex. TMSA. – Kenya, Witu, Lamu, Wangi, without date, leg. G. Denhardt, 1 ex. ZSM, 3 ex. MNB (det. Bremer). – Tanzania, Mgorogoro Prov. 10 km N Mikumi, 11.I.2007, leg. F. Kantner, 1 ex. SMNS.

Type locality. “Bulawayo”.

Remarks. *Cryptops ulomoides* Solier, 1851 from Chile is a junior synonym of *Alphetobius diaperinus* (Panzer, 1796) (see below). Thus *A. ulomoides* Koch, 1953 is a homonym and must have a new name, *arnoldi* nom. n.



Figures 1–4. Dorsal view of African species of the genus *Alphitobius* and *Ulomoides*. **1** *A. crenatus*, non-type Madagascar, SMNS **2** *A. lamottei*, non-type Central African Republic, SMNS **3** *Ulomoides basilewskyi* comb. n., holotype, MRAC **4** *A. arnoldi* nom. n., non-type Tanzania, SMNS. Scale: 2 mm.

Etymology. The new name is derived in honor of George Arnold (1881–1963), former curator in the “Rhodesia Museum” (now Natural History Museum of Zimbabwe, Bulawayo), specialist of African Hymenoptera, and collector of the holotype.

Distribution. Zimbabwe, Congo (Koch 1953); Somalia, Kenya, Tanzania (new records).

***Alphitobius capitaneus* sp. n.**<http://zoobank.org/C18D8875-7C0A-46B4-8195-313B8DE1A2BE>http://species-id.net/wiki/Alphitobius_capitaneus

Figs 16, 20

Type specimens. Holotype male: Kenya, Samburu Nature Reserve, Samburu River Lodge, 28.III.1988, leg. R. Grimm, CRG.

Diagnosis. *Alphitobius capitaneus* sp. n. is distinguished from its congeners by size and shape of body. A similar body shape, especially the shape of pronotum has *A. lamottei* Ardoïn, 1963, but this species is smaller (body length ≤ 7.0 mm) and differs by the reddish colour, by much finer punctation of dorsal surface, by longer and less distinct serrate antennae with basal antennomeres more elongated, and by the somewhat more stretched and apically narrowed apicale of aedeagus.

Description. Body length 8.8 mm, width at widest point behind middle of elytra 3.6 mm. Elongate, blackish brown, matt; borders of pronotum, lateral borders of elytra, sutural interval, and scutellum paler reddish brown. Complete dorsal surface with very fine and dense punctation, punctures bearing a minute seta. Head sub-trapezoidal; outline continuous, not interrupted between clypeus and frons; apical margin of epistome shallowly emarginate in the middle; fronto-clypeal suture complete and linearly impressed. Eyes large, constricted by genal canthus, dorsal part smaller than ventral part. Genal canthus hardly projecting beyond contours of eyes, with the outlines nearly continuous with the outlines of the latter. Tempora strongly narrowed towards neck. Antennae thickened, not reaching the base of pronotum, with the seven distal antennomeres forming a kind of club; 2nd antennomere wider than long; 3rd elongate, one and a half times as long as wide; 4th only slightly, 5th to 10th distinctly wider than long and distinctly serrate; distal antennomere rounded, as wide as long. Pronotum transverse, width/length ratio 1.7; transverse convex, widest at base, shallowly arcuate narrowing to apex. Anterior margin shallowly emarginate, basal margin bisinuate, all margins finely bordered; lateral margins separated from discal convexity by a narrow submarginal depression. Anterior and posterior corners rectangular. Propleura densely covered with small seta bearing tubercles, only along outer margins nearly smooth. Prosternum rugosely punctured, prosternal apophysis bent down behind procoxae. Elytra convex, elongate oval with subparallel sides and densely punctured striae; scutellar striole absent; intervals much broader than striae, nearly flat on disc, becoming more and more convex laterally and distally; lateral margins in dorsal view visible nearly over entire length, only concealed around apex; base as wide as base of pronotum; humeral angles obtuse, distinct. Scutellum large, triangular. Mesoventrite roughly punctured, with shiny median carina in basal part; triangular apophysis raised upwards and excavate. Metaventrite shiny, with fine median sulcus, finely punctured on disc, somewhat more coarsely punctured laterally. Abdominal ventrites with very dense and fine punctation throughout, basally and laterally longitudinally wrinkled. Tibiae gradually and faintly dilated towards apex, without modifications. Aedeagus as in Fig. 20.

Etymology. Capitaneus (Latin) means conspicuous by greatness, refers in this case to the body size.

***Alphitobius crenatus* (Klug, 1834)**http://species-id.net/wiki/Alphitobius_crenatus

Figs 1, 21

Phaleria crenata Klug, 1834*Cataphronetis luctuosa* Fairmaire, 1869, syn.

New material. Madagascar, no further data, 2 ex. TMSA. – Madagascar, Ambaton, no further data, 1 ex. SMNS. – S Madagascar, Midongy, no further data, 3 ex. SMNS. – C Madagascar, Katsepy (Majunga), 24.–31.XII.1997, leg. P. Pacholátko, 1 ex. SMNS. – Madagascar, Antananarivo Distr., Moramanga, 12.II.1995, leg. I. Jeniš, 1 ex. ZSM. – Madagascar, Toliaro Prov., Andohahela NP, Forêt d’Ambohibory, 300 m, 16.–20.I.2002, leg. Fisher, Grifswold et al., 1 ex. CRA. – Madagascar, Toliaro Prov., Cap Sainte Marie, 200 m, 11.–15.II.2002, leg. Fisher, Grifswold et al., 3 ex. CRA. – Madagascar, Toliara Prov., Forêt de Tsinjoriaky, 70 m, 6.–10.III.2002, leg. Fisher, Grifswold et al., 1 ex. CRA. – Madagascar, Toliara Prov., Tsimanampetsotsa NP, 25 m, 18.–22.III.2002, leg. Fisher, Grifswold et al., 1 ex. CRA.

Type locality. “Madagascar” (*crenata*), “Nossi-Bé” (*luctuosa*).

Distribution. Madagascar (type locality), eastern Africa, Comores, Seychelles, Aldabra Islands (Koch 1953).

***Alphitobius diaperinus* (Panzer, 1796)**http://species-id.net/wiki/Alphitobius_diaperinus

Figs 15, 22

Tenebrio diaperinus Panzer, 1796*Tenebrio ovatus* Herbst, 1799, syn.*Uloma opatroides* Brullé, 1838, syn.

Cryptops ulomoides Solier, 1851, syn. n. (not homonym *Alphitobius ulomoides* Koch, 1953, *arnoldi* nom. n.)

Crypticus longipennis Walker, 1858, syn.*Phaleria rufipes* Walker, 1858, syn.*Proselytus caffer* Fähræus, 1870, syn.

Type specimens examined. Chile (labelled as Chili), Valparaiso, Gay 15-43, 1 syntype of *Cryptops ulomoides* Solier, 1851, MNHN, designated herewith as lectotype.

New material. Somalia, Genale, 1935, leg. R. Ciferri, 3 ex. TMSA. – Sudan, Mt. Sangha, no further data, leg. Škulina, 1 ex. NMP. – Sudan, Wad Medani, 21.XII.1952, leg. W. Büttiker, 1 ex. TMSA. – Ghana, Ashanti Region, Kumasi, Nhiasu, 16.V.1987, leg. S. Endrödy-Younga, 1 ex. TMSA. – Nigeria, Ile-Ife, 7.VII.1988, leg. F.-T. Krell, 10 ex. SMNS. – Liberia, Bong Town, 23.III.1988, leg.

F.-T. Krell, 3 ex. SMNS. – Ivory Coast, Adiopodoumé, 11.V.1988, leg. F.-T. Krell, 8 ex. SMNS. – Cameroon, Buea, 11.II.1980, leg. H. Schmalfuss & M. Schlegel, 6 ex. SMNS. – Guinea, Kouroussa, 16.XI.1995, leg. U. Lange, 1 ex. SMNS. – Congo, Tshuapa, Flandria, 1946/1947, leg. P. Hulstaert, 3 ex. TMSA. – Uganda, Kampala, V.1927, leg. H. Hargreaves, 1 ex. TMSA (det. Bryant). – Kenya, no further data, leg. Škulina, 1 ex. NMP. – Kenya, Voi (Tsavo), 8.–10.XI.1996, leg. M. Snížek, 1 ex. CRG. – Zambia, 30 km NE Livingstone, 1.XI.2002, leg. F. Wachtel, 1 ex. CRG. – Zambia, 30 km NW Sesheke, 13.I.2010, leg. P. Schüle, 1 ex. SMNS. – Zambia, Western Prov., 7.6 km S Ushaa, 1050 m, 2.XII.2010, leg. F. Génier, 1 ex. CNC. – Angola, Cunene Prov., 10 km N Humbe, 3.XI.2011, leg. P. Schüle, 1 ex. SMNS. – Angola, Oshikoto Prov., 9 km S Ondangwa Nakambale Museum, 25.XI.2012, leg. P. Schüle, 1 ex. SMNS. – Namibia, Abachaus, XII.1949, leg. G. Hobohm, 1 ex. TMSA. – Namibia, Kaokoveld, 13 km W Ehombe Mt., 11.II.1975, leg. S. Endrödy-Younga & Schulze, 1 ex. TMSA. – Namibia, Etosha NP, Halali, 16.–17.XII.1993, leg. M. Uhlig, 1 ex. MNB. – NW Namibia, Epupa Falls, 660 m, 11.–12.IV.2005, leg. W. Schawaller, 1 ex. SMNS. – S Namibia, Naukluft Park East, 1500 m, 7.–10.II.2010, leg. W. Schawaller, 1 ex. SMNS. – Botswana, Okavango, Maxwee Lagoon, VIII.1976, leg. Russel-Smith, 1 ex. TMSA. – South Africa, Northern Cape, Pofadder, 760 m, 4.X.1990, leg. W. Wittmer, 1 ex. NHMB. – South Africa, Limpopo, Krüger NP, 18.VI.1990, leg. L. Braack, 3 ex. TMSA. – South Africa, Limpopo, Amatola Farm NE Vivo, 1000 m, 15.–17.XII.2003, leg. W. Schawaller, 4 ex. SMNS. – South Africa, Gauteng, Pretoria Distr, Roodeplat, 8.–10.X.1960, leg. Neubecker, 1 ex. TMSA. – South Africa, Gauteng, Ezemvelo NR, 26.I.2004, leg. TMSA staff, 3 ex. TMSA. – South Africa, KwaZulu-Natal, Hluhluwe, 29.XI.1992, leg. S. Endrödy-Younga, 1 ex. TMSA. – South Africa, KwaZulu-Natal, Ndumo, 21.XI.2002, leg. J. Harrison & R. Müller, 1 ex. TMSA. – South Africa, KwaZulu-Natal, Kosi Bay NR, 11.–17.XI.2002, leg. W. Schawaller, 1 ex. SMNS. – South Africa, Free State, Farm Abel 52, 4 km E Parys, 12.–13.I.1992, leg. M. Krüger, 6 ex. TMSA. – South Africa, Northern Cape, 70 km S Olifantshoek, Witsand NR, 1200 m, 4.–7.II.2012, leg. W. Schawaller, 2 ex. SMNS. – Madagascar, Kirindy Forest, 21.XI.1998, leg. R. Müller, 2 ex. TMSA. – Madagascar, Tsaratanana, Antsirasia, Morwato West, 26.XI.–3.XII.2001, leg. V. Dolin, 1 ex. SMNS. – Rodrigues Island, Anse aux Anglais, Port Mathurin, 22.IX.1995, leg. R. Fricke, 4 ex. SMNS.

Type locality. “Germanica” (*diaperinus*); “Valparaiso” (*ulomoides*).

Synonymy. Examination of the syntype of *Cryptops ulomoides* Solier, 1851, shows a complete correspondence with *Alphitobius diaperinus*. The genus *Cryptops* was considered as synonym of *Alphitobius* since a long time (for example in the world catalogue of Gebien 1940), but the species *ulomoides* Solier, 1851 was not formally synonymised with *diaperinus* Panzer, 1796, so far. In consequence, *Alphitobius ulomoides* Koch, 1953 is a homonym and needs a new name, *arnoldi* nom. n. (see above).

Distribution. Cosmopolitan.

***Alphitobius grandis* Fairmaire, 1897**

http://species-id.net/wiki/Alphitobius_grandis

Remarks. Material of this taxon is unknown to the authors. The type is said to be 9 mm long (Fairmaire 1897), the antennae are relatively short (“assez courtes et robustes”), the anterior corners of the pronotum are rectangular (“presque droit”), and the elytra have weak striae with large punctures (“stries assez peu profondes, mais fortement ponctués”).

Type locality. “Madagascar”.

Distribution. Madagascar.

***Alphitobius hobohmi* Koch, 1953**

http://species-id.net/wiki/Alphitobius_hobohmi

Figs 5, 23

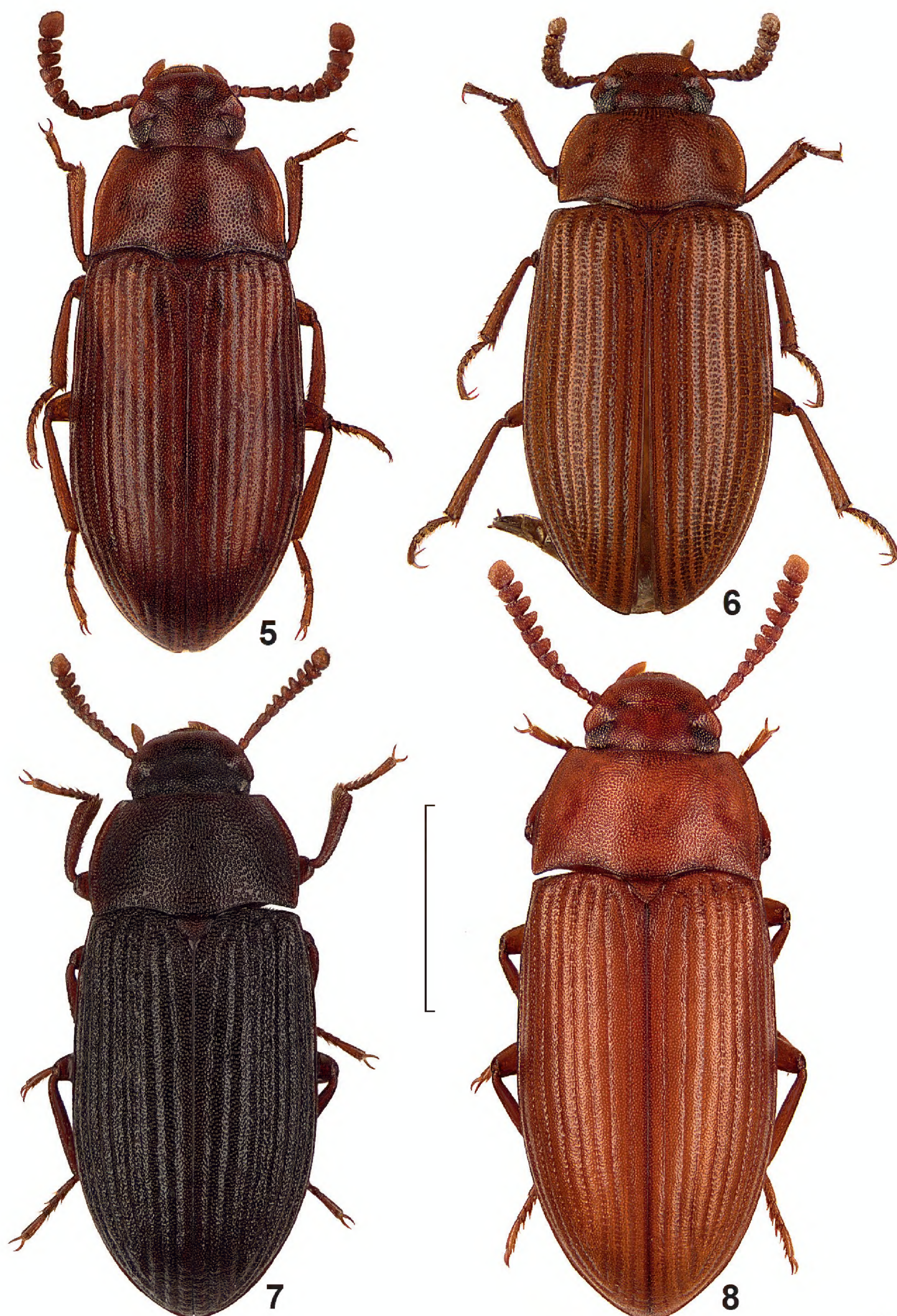
Alphitobius rufus Ardoin, 1976, syn. n.

Type specimens examined. Namibia (labelled as SWA), Abachaus, XII.1946, leg. G. Hobohm, holotype, 1 paratype *hobohmi* TMSA (sex not examined). – Tanzania, Mts. Uluguru, Morogoro Campus Fac. Agriculture, 600 m, V./VI.1971, leg. J. Debecker, ♀ holotype *rufus* MRAC.

New material. Ethiopia, Hararge Prov., Bisidimo, 1500 m, V.–VII.1984, leg. V. Meyer, 2 ex. ZSM. – Kenya, Meru Distr., Materi (Mitunguu), 800 m, 8.IV.1987, leg. R. Mourglia, 1 ex. SMNS (*rufus* det. Bremer). – Kenya, Meru Distr., Mojwa, 1300 m, 3.IV.1987, leg. R. Mourglia, 1 ex. ZSM (*rufus* det. Bremer). – Tanzania, Moschi, no further data, 1 ex. ZSM. – Tanzania, Manyara Lake, XII.1961, leg. H. & B. Frey, 1 ex. NHMB. – Namibia, Windhuk, 1906, leg. F. Kunze, 1 ex. MNB (det. Ferrer). – Angola, Blé Prov., Chissamba Mission Station, 1440 m, 9.XI.2011, leg. R. Müller, 1 ex. TMSA. – Angola, Huila Prov., 10 km SW Cacula, 1550 m, 4.–6.XI.2011, leg. R. Müller & P. Schüle, 1 ex. TMSA, 3 ex. SMNS. – Angola, Huila Prov., 15 km S Caluquembe, 1620 m, 6.XI.2011, leg. R. Müller, 1 ex. TMSA. – Angola, Huila Prov., 3.5 km SW Negola, 8.XII.2012, leg. P. Schüle, 2 ex. SMNS, 2 ex. CRG. – South Africa, Limpopo, Naboomspruit, Torino Ranche, 15.I.1990, leg. S. Endrödy-Younga, 1 ex. TMSA. – South Africa, Limpopo, 10 km N Modimolle (Nylstroom), 1300 m, 10.XII.2008, leg. R. Müller, 1 ex. TMSA. – South Africa, Free State, Bothaville, Vaal River, 16.I.2003, leg. M. Snižek, 1 ex. SMNS. – South Africa, KwaZulu-Natal, SW Magudu, 4.–5.I.2009, leg. R. Müller & P. Schüle, 2 ex. SMNS, 2 ex. TMSA. – South Africa, KwaZulu-Natal, Ndumo NR, 100 m, 10.XII.2010, leg. R. Müller, 1 ex. TMSA.

Type localities. “Abachaus, Otjiwarongo” (*hobohmi*), “Morogoro” (*rufus*).

Synonymy. The Type specimens examined of *A. hobohmi* and *A. rufus*, as well as several non-type specimens from Namibia and adjacent Angola (near type locality of *hobohmi*), and from Tanzania and Kenya (near type locality of *rufus*) show no distinct external differences. The aedeagi of type specimens can not be compared, because the holotype of *rufus* is a female. Nevertheless, *A. rufus* is considered as a junior synonym of *A. hobohmi*.



Figures 5–8. Dorsal view of African species of the genus *Alphitobius*. **5** *A. hobohmi*, non-type Angola, SMNS **6** *A. leleupi*, paratype, TMSA **7** *A. rugosulus*, non-type Tanzania, SMNS **8** *A. viator*, non-type RSA, SMNS. Scale: 2 mm.

Remarks. In some localities (for example Modimolle and Magudu) *A. hobohmi* was collected together with *A. viator*.

Distribution. Namibia (Koch 1953, Ferrer 2004); Tanzania, Kenya (Ardoin 1976); Ethiopia, Angola, South Africa (new records).

***Alphitobius karrooensis* Koch, 1953**

http://species-id.net/wiki/Alphitobius_karrooensis

Figs 13, 24

Type specimens examined. Eastern Cape, Willowmore, 20.III.1919, leg. H. Brauns, holotype, 3 paratypes TMSA.

New material. Tanzania, Tabora, leg. Holtz, 1 ex. MNB (det. Bremer as *A. leleupi*). – Zambia, Western Prov., 3.8 km E Namushakende, 1100 m, 29.XI.2010, leg. F. Génier, 1 ex. CNC. – Zambia, Western Prov., 7 km S Mukokwa, 1100 m, 1.XII.2010, leg. F. Génier, 1 ex. CNC, 1 ex. SMNS. – Botswana, Okavango, Thamalakane, XII.1973, leg. P. Reavel, 1 ex. CRG. – Botswana, Chizwina, Francistown-Mosetse, 5.V.1995, leg. J. Harrison, 1 ex. SMNS. – Namibia (labelled as S. W. Africa), 3 miles NE Waterberg, 1420 m, 21.XII.1966, leg. E. S. Ross & K. Lorenzen, 1 ex. CRA. – Namibia (labelled as S. W. Africa), Okahandja, Farm Okaundua, 21.–29.XI.1933, leg. W. Krieg, 1 ex. NHMB. – South Africa, Northwest Prov., Bloemhof, 24.IV.1961, leg. F. Zumpt, 2 ex. NHMB. – South Africa, Kalahari Gemsbok Park, Nossob River, V.1956, TMSA Expedition, 12 ex. TMSA, 2 ex. SMNS. – South Africa, Kalahari Gemsbock Park, Mata-Mata, 18.XII.1974, leg. S. Endrödy-Younga, 1 ex. TMSA. – South Africa, Limpopo, Waterberg, Geelhoutbush Farm, 3.X.1995, leg. S. Endrödy-Younga & C. Bellamy, 2 ex. TMSA. – South Africa, Northern Cape, Garies, 14.XI.1948, leg. C. Koch, 1 ex. TMSA. – South Africa, Northern Cape, Witsand NR, 1160 m, 5.II.2012, leg. R. Müller, 1 ex. TMSA. – South Africa, Eastern Cape, Willowmore, I.1954, leg. F. Zumpt, 7 ex. NHMB, 2 ex. SMNS.

Type locality. “Willowmore”.

Distribution. South Africa (Koch 1953); Tanzania, Zambia, Botswana, Namibia (new records).

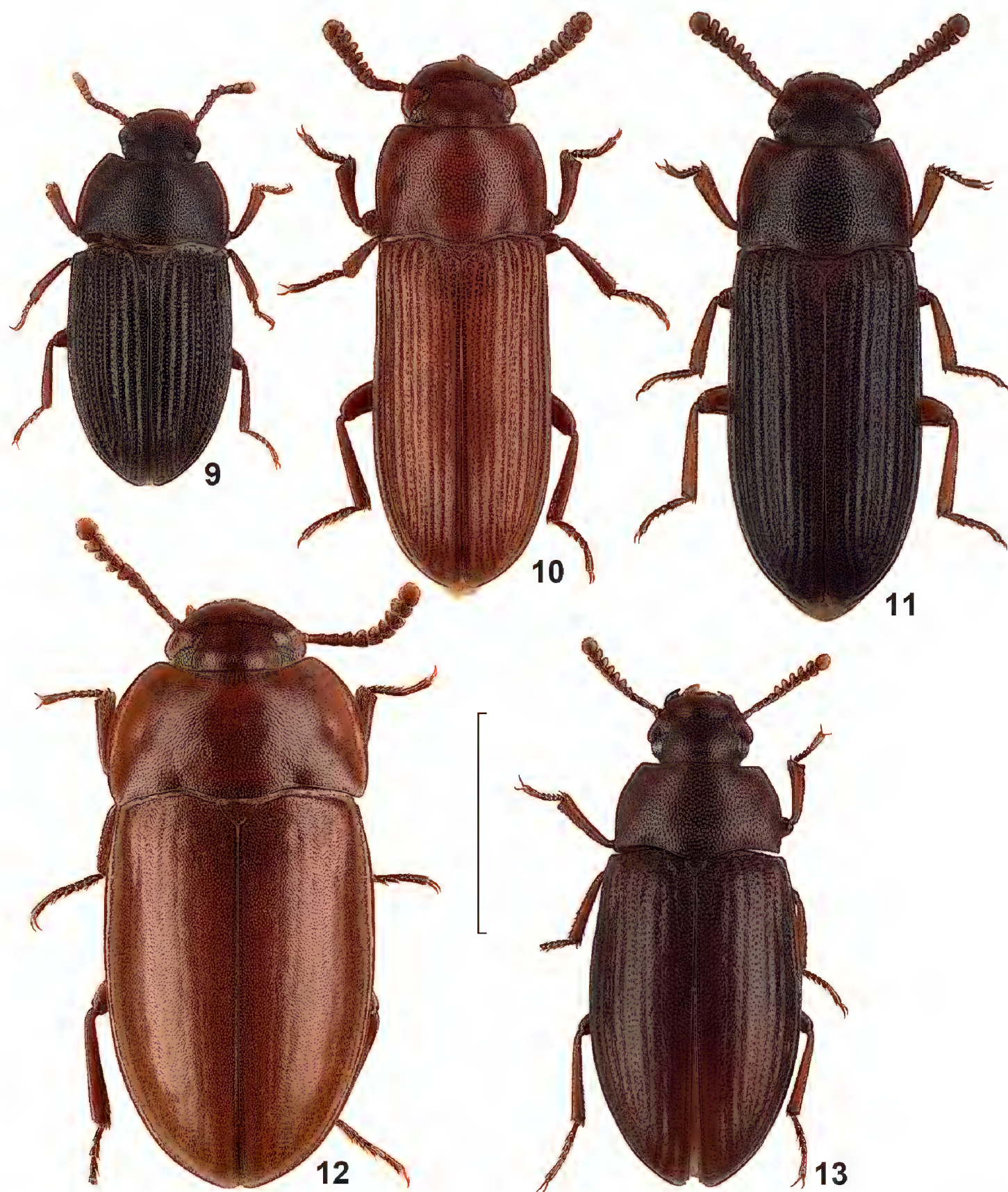
***Alphitobius kochi* Ardoin, 1958**

http://species-id.net/wiki/Alphitobius_kochi

Figs 9, 25

Type specimens examined. Cameroon, N’Kongsamba, XI.1956, leg. J. Cantaloube, 4 paratypes TMSA, 2 paratypes NHMB, 1 paratype MNB, 1 paratype ZSM.

New material. Cameroon, Bambui, 9 miles NE Bamenda, 1450 m, 29.X.1966, leg. E. S. Ross & K. Lorenzen, 1 ex. CRA. – Cameroon, Doala, 10 m, 20.X.1966, leg. E. S. Ross & K. Lorenzen, 7 ex. CRA, 2 ex. SMNS, 1 ex. CRG. – Ivory Coast, 10



Figures 9–13. Dorsal view of African species of the genus *Alphitobius*. **9** *A. kochi*, non-type Togo, SMNS **10** *A. lucasorum*, paratype, TMSA **11** *A. parallelepennis*, non-type Angola, SMNS **12** *A. acutangulus*, non-type Sudan, SMNS **13** *A. karrooensis*, non-type RSA, TMSA. Scale: 2 mm.

miles SE Touba, 420 m, 20.VIII.1966, leg. E. S. Ross & K. Lorenzen, 12 ex. CRA, 2 ex. SMNS. – Liberia, Cari Suakoko, 17.III.1988, leg. F.-T. Krell, 1 ex. SMNS. – Togo/Ghana, border area, Brou fou, 27.X.1984, leg. K. Erber, 1 ex. SMNS.

Type locality. “N’Kongsamba”.

Distribution. Cameroon (type locality), Ivory Coast (Ardoin 1969, Bremer and Girard 1996); Liberia, Togo, Ghana (new records).

***Alphitobius laevigatus* (Fabricius, 1781)**

http://species-id.net/wiki/Alphitobius_laevigatus

Figs 14, 26

Opatrum laevigatus Fabricius, 1781

Tenebrio mauritanicus Fabricius, 1792, syn.

Helops picipes Panzer, 1794, syn.

Helops piceus Olivier, 1795, syn.

Alphitobius granivorus Mulsant & Godart, 1868, syn.

Cataphronetis striatulus Fairmaire, 1869, syn.

Microphyes rufipes MacLeay, 1873, syn.

Alphitobius ruficolor Pic, 1925, syn.

New material. Somalia, Eil (Nogal), III./IV.1938, leg. S. Venzo, 1 ex. TMSA. – Niger, Maradi, 5.–7.VIII.1981, leg. R. Grimm, 1 ex. CRG. – Niger, Niamey, 9.–14.VIII.1989, leg. R. Grimm, 2 ex CRG. – Ghana, Ashanti Region, Kumasi, Nhiasu, 16.V.1967, leg. S. Endrödy-Younga, 1 ex. TMSA. – Cameroon, Longji, 1905, leg. H. Paschen, 1 ex. MNB. – Cameroon, Sasse-Buea, IV.–V.1951, collector unknown, 1 ex. CRA. – Congo, Oubangui-Chari, no further data, leg. Škulina, 1 ex. NMP. – Kenya, no further data, leg. Škulina, 1 ex. NMP. – Tanzania, Daressalam, Pangani, about 1930, leg. R. Regner, 6 ex. MNB. – Tanzania, Pangani to Tanga, VI.1891, leg. Conradt, 2 ex. MNB. – Tanzania, Massa to Tanga, 14.VII.–6.VIII.1891, leg. Conradt, 3 ex. MNB. – Madagascar, Fianarantsoa Prov., Ranamafona, 29.XI.–2.XII.1995, leg. I. Jeniš, 1 ex. CRG. – Madagascar, Ambovombe Distr., Faux Camp, I.1956, leg. C. Koch, 2 ex. TMSA. – Namibia, Fish River Canyon, Ai-Ais, 250 m, 19.XI.1993, leg. M. Uhlig, 1 ex. MNB. – South Africa, Limpopo, Krüger NP, Skukuza, 29.I.1994, leg. S. Endrödy-Younga, 1 ex. TMSA. – South Africa, Limpopo, Krüger NP, Skukuza, 8.–22.XII.2009, leg. J. Harrison, 2 ex. TMSA. – South Africa, Limpopo, Krüger NP, Skukuza, VIII.1992, leg. L. Braack, 10 ex. TMSA. – South Africa, Gauteng, Pretoria, 28.XI.1999, leg. B. Dombrowsky, 1 ex. TMSA. – South Africa, Cape Town, 1965, leg. Dickson, 2 ex. TMSA.

Type locality. “Noua Zelandia”.

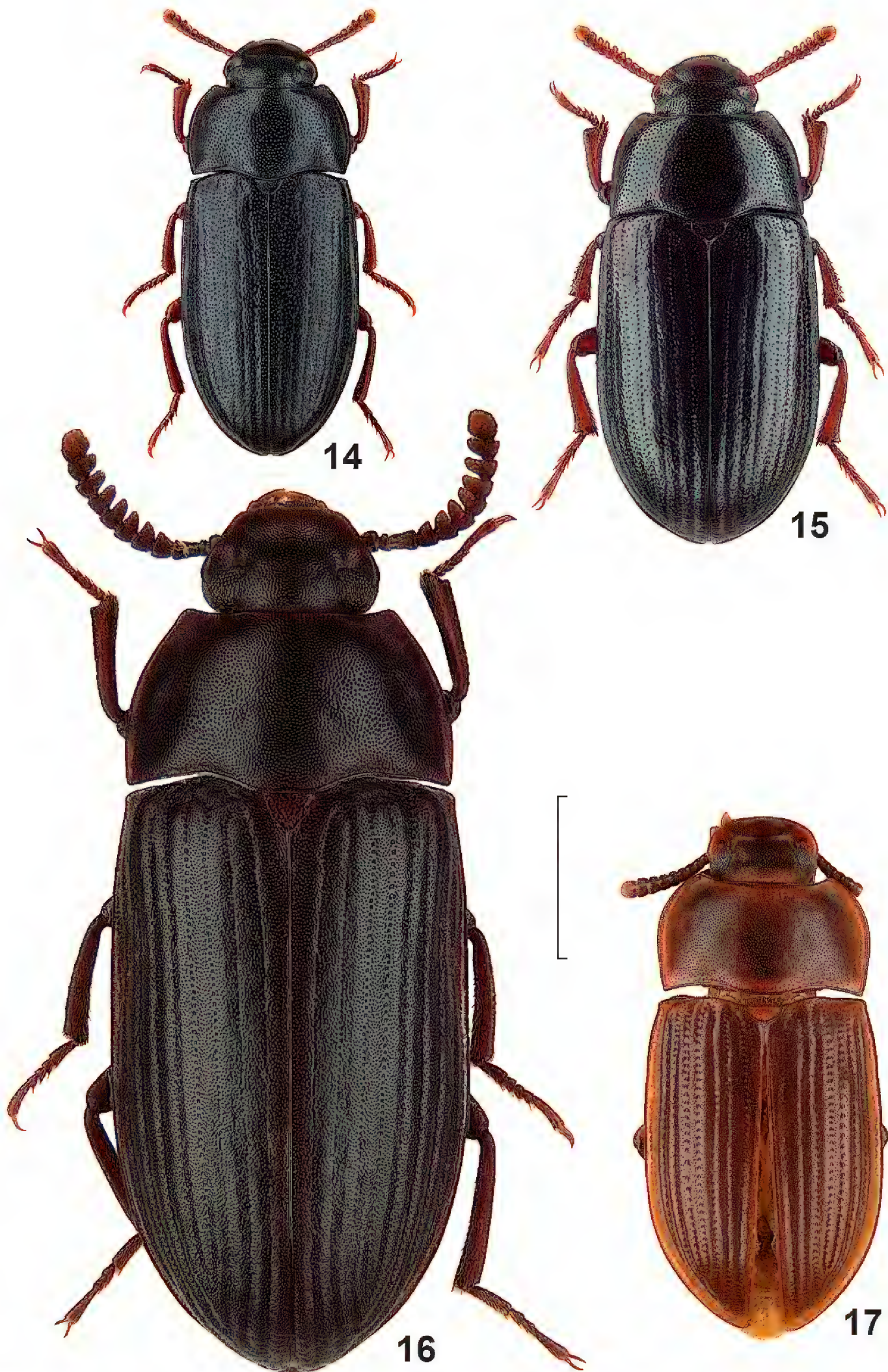
Distribution. Cosmopolitan.

***Alphitobius lamottei* Ardoin, 1963**

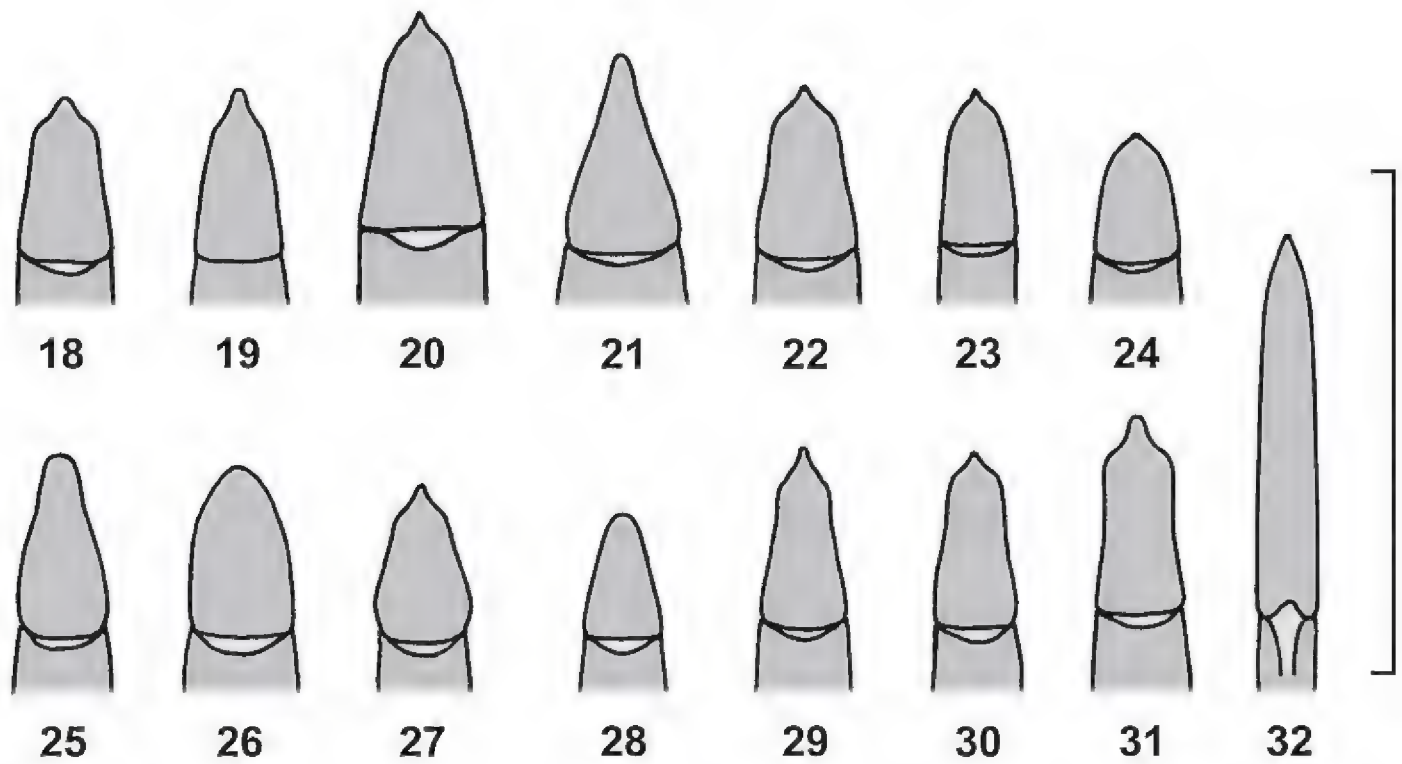
http://species-id.net/wiki/Alphitobius_lamottei

Fig. 2

New material. Ivory Coast, Bingerville, V.1962, leg. J. Decelle, 1 ex. NHMB. – Guinea, Gbakoré, XII.1983, leg. C. Girard, 2 ex. TMSA (det. Bremer). – Guinea, Mt. Nimba, Keoulenta, 12.I.1984, leg. C. Girard & M. Lamotte, 1 ex. TMSA (det. Bremer). – The Gambia, Kabafita Forest Park, 19.VII.2000, leg. R. Grimm, 1 ex. CRG. – Central African Republic, 35 km E Ndele, 450 m, 18.V.2009, leg. J. Halada, 1 ex. SMNS.



Figures 14–17. Dorsal view of African species of the genus *Alphitobius*. **14** *A. laevigatus*, non-type Germany, SMNS **15** *A. diaperinus*, non-type Germany, SMNS **16** *A. capitaneus* sp. n., holotype, CRG **17** *A. limbalis*, doubtful cotype, NHMB. Scale: 2 mm.



Figures 18–32. Apical view of aedeagus of African species of the genus *Alphonso* and *Ulomoides*. **18** *A. acutangulus*, non-type Sudan, SMNS **19** *A. arnoldi* nom. n., non-type Tanzania, SMNS **20** *A. capitaneus* sp. n., holotype, CRG **21** *A. crenatus*, non-type Madagascar, SMNS **22** *A. diaperinus*, non-type Zambia, SMNS **23** *A. hobohmi*, non-type Angola, SMNS **24** *A. karooensis*, non-type Botswana, SMNS **25** *A. kochi*, non-type Ivory Coast, SMNS **26** *A. laevigatus*, non-type Nepal, SMNS **27** *A. leleupi*, non-type Congo, SMNS **28** *A. lucasorum*, paratype, SMNS **29** *A. parallelipennis*, non-type Zambia, CRG **30** *A. rugosulus*, non-type Tanzania, SMNS **31** *A. viator*, non-type Zambia, CRG **32** *Ulomoides basilewskyi* comb. n., holotype, MRAC. Scale: 1 mm.

Type locality. “Mt. Nimba”.

Distribution. Guinea (type locality); Senegal (Ardoïn 1963a); Ivory Coast (Ardoïn 1969, Bremer and Girard 1996); The Gambia (Grimm 2002); Central African Republic (new record).

Alphonso leleupi Koch, 1953

http://species-id.net/wiki/Alphonso_leleupi

Figs 6, 27

Type specimens examined. Congo, Massif de Kundelungu, 14.XII.1949, leg. N. Leleup, 29 paratypes TMSA, 2 paratypes SMNS, 1 paratype CRG, 1 paratype ZSM.

New material. Congo, 57 miles N Popokabaka, 3.VIII.1957, leg. E. S. Ross & R. E. Leech, 2 ex. CRA, 1 ex. SMNS.

Type locality. “Kundelungu”.

Remarks. Among the type series in TMSA, the missing holotype of *A. parallelipennis* was found, see remarks under that species.

Distribution. Congo, Kenya (Koch 1953).

***Alphitobius limbalis* Fairmaire, 1901**

http://species-id.net/wiki/Alphitobius_limbalis

Fig. 17

Type specimens examined. Without any data, 1 female “cotype” NHMB (Gebien collection).

Remarks. It seems doubtful to the authors, if the above listed female (body length 6 mm) without any data is really a type specimen. Other material of this taxon is unknown to the authors. The species is said to be similar to *A. luctuosus* (synonym of *Alphitobius crenatus* (Klug, 1833) (Fairmaire 1901), but is characterised by larger body size (6 mm), rounder pronotum and larger punctures in elytral striae.

Type locality. “Bélumbé”.

Distribution. Madagascar.

***Alphitobius lucasorum* Bremer, 1985**

http://species-id.net/wiki/Alphitobius_lucasorum

Figs 10, 28

Type specimens examined. Sudan, N Darfur Prov., El Geneina, 7.–15.VI.1978, leg. I. Abuzinid, 1 paratype SMNS, 1 paratype TMSA, 1 paratype ZSM. – Ghana, Northern Prov., Nyankpala, 15 km W Tamale, 1.–30.IV.1970, leg. S. Endrödy-Younga, 2 paratypes TMSA.

Type locality. “El Geneina”.

Distribution. Cameroon, Nigeria, Ghana, Senegal, Sudan (type locality) (Bremer and Girard 1996); Chad (Bremer 1985).

***Alphitobius niger* Ferrer, 1983**

http://species-id.net/wiki/Alphitobius_niger

Type specimens examined. None, see remarks.

Remarks. Unfortunately, this species was overlooked during the study, and was added here only during the review process. The species is said to be similar to *A. ulomoides*, for diagnosis and figures see Ferrer (1983). Genal canthus projecting outwards beyond contours of eyes, pronotum widest near base, aedeagus with acute apicale, body length 8 mm.

Type locality. “Lake Manyara”.

Distribution. Tanzania (type locality).

***Alphitobius parallelipennis* Koch, 1953**

http://species-id.net/wiki/Alphitobius_parallelipennis

Figs 11, 29

Type specimens examined. Congo, Lulua, Tshibamba, XII.1931, leg. G. F. Overlaet, holotype MRAC. – Congo, Elisabethville, 7.XI.1923, leg. C. Seydel, 1 paratype TMSA.

New material. Angola, Huila Prov., 75 km N Kaconda, 1640 m, 10.XI.2011, leg. R. Müller, 1 ex. TMSA. – Angola, Huila Prov., 10 km S Kacula, 1560 m, 12.–13. XI.2011, leg. R. Müller & P. Schüle, 1 ex. TMSA, 1 ex. SMNS. – Angola, Huila Prov., 15–20 km S Caluquembe, 6.–7.XI.2011, leg. R. Müller & P. Schüle, 2 ex. TMSA, 2 ex. SMNS. – Angola, Huila Prov., 3.5 km SW Negola, 8.XII.2012, leg. P. Schüle, 2 ex. SMNS. – Zambia, 150 km S Kasemba, 11.XI.2002, leg. F. Wachtel, 11 ex. CRG. – Zambia, 40 km NE Livingstone, Mabula Camp, 14.XI.2002, leg. F. Wachtel, 1 ex. CRG. – Zambia, Lusaka, Kafue River, 1200 m, 22.XI.–2.XII.1987, leg. R. Mourglia, 4 ex. ZSM. – Zambia, Northern Prov., Chipona Falls, 30 km S Chinsali, 5.–6. XII.2002, leg. F. & L. Kantner, 1 ex. SMNS. – Zambia, Copperbelt Prov., NW Kapiri Mposhi, 8.XII.2002, leg. F. & L. Kantner, 1 ex. SMNS. – Zambia, Central Prov., 25 km NE Lilemone, 1250 m, 5.XII.2010, leg. F. Génier, 6 ex. CNC. – Zambia, Lusaka Prov., 9 km E Mulalika, 1100 m, 24.XI.2010, leg. F. Génier, 1 ex. CNC. – South Africa, Limpopo, Krüger NP, Shingwedzi, 19.–20.XI.1961, leg. Vári & Rorke, 1 ex. TMSA. – South Africa, Limpopo (labelled as Transvaal), Manyeleti Game Reserve, 18.XI.1987, leg. T. van Viegen, 1 ex. TMSA.

Type locality. “Lulua, Tshibamba”.

Remarks. Bremer (1985) already assumed, that some specimens of the type series of *A. leleupi* and *A. parallelipennis* in TMSA are mislabelled, and that the actual depository of the holotype of *A. parallelipennis* seems unknown, at least it is not present in MRAC as published in the original description. De Meyer (VII.2013 in an email to the senior author) confirmed, that the holotype is lacking in MRAC with the remark “non renvoyé par Koch”. During the last visit of the senior author in TMSA, the mixture of locality and type labels could be confirmed, and also corrected. The holotype of *A. parallelipennis* could be recognised without any doubts among the type series of *A. leleupi*, although mislabelled, and was transferred with correct secondary labels from TMSA to MRAC.

Distribution. Congo (Koch 1953); Angola, Zambia, northeastern South Africa (new records).

***Alphitobius rugosulus* Koch, 1953**

http://species-id.net/wiki/Alphitobius_rugosulus

Figs 7, 30

Type specimens examined. None, not in TMSA.

New material. Ethiopia, Oromia, 6.5 km SE Chichilla, 1550 m, 17.V.2012, leg. F. Wachtel, 1 ex. CRG. – Tanzania, Dodoma Prov., 15 km N Dodoma, 1550 m,

19.XII.2006, leg. F. Kantner, 1 ex. SMNS. – Tanzania, Dodomo Prov., 70 km N Dodoma, 1350 m, 17.XII.2006, leg. F. Kantner, 1 ex. SMNS.

Type locality. “Campi Simba”.

Distribution. Kenya (Koch 1953); Ethiopia, Tanzania (new records).

***Alphonotobius viator* Mulsant & Godart, 1868**

http://species-id.net/wiki/Alphonotobius_viator

Figs 8, 31

Uloma rufula Fairmaire, 1883, syn.

New material. Ethiopia, Ambo, 3.XI.1990, leg. L. Medvedev, 1 ex. SMNS. – Sudan, North Dafur, El Geneina, 10.VII.1978, leg. I. Abuzinid, 1 ex. ZSM (det. Kaszab). – Ivory Coast, Bingerville, 1962–1964, leg. J. Decelle, 6 ex. MRAC (det. Ardoin). – Ivory Coast, Kafolo/Comoé, 21.IV.1988, leg. F.-T. Krell, 1 ex. SMNS. – Burkina Faso (labelled as Haute Volta), Ouagadougou, no date, leg. Škulina, 1 ex. NMP. – Guinea, N’Zerekoré, 1.–15.XI.1951, leg. S. H. Olsen, 4 ex. NHMB. – Guinea Bissau, Bolama, VI.–XII.1899, leg. L. Fea, 1 ex. NHMB. – Congo, Tshiobo, N’Goy, 3.–4.VII.1926, leg. A. Collart, 2 ex. TMSA, 1 ex. SMNS. – Central African Republic, Uam, Bosum, IV.–VI.1914, leg. Tessmann, 11 ex. MNB. – Central African Republic, 40 km SW Bandoro, 530 m, 14.IV.2010, leg. Halada, 1 ex. SMNS. – Cameroon, Jaunde, X.1914, leg. Tessmann, 1 ex. MNB. – Kenya (labelled as Afr. or.), Ikutha, no further dates, 7 ex. MNB. – Kenya, Mt. Elgon, eastern slope, 2200 m, 23.–27.III.1988, leg. H. J. Bremer, 1 ex. ZSM. – Tanzania, 2 miles SE Mkomazi, 1500 ft. (460 m), 7.I.1970, leg. M. E. Irwin & E. S. Ross, 1 ex. CRA. – Malawi, Salima, 5.–6.I.2002, leg. J. Bezděk, 1 ex. SMNS. – Zambia (labelled as N Rhodesia), Lochinvar, near Monze, 13.–26.X.1962, leg. F. Zumpt, 3 ex. NHMB. – Zambia, Northern Prov., Chipona Falls, 30 km S Chinsali, 5.–6.XII.2002, leg. F. Kantner, 1 ex. SMNS. – Zambia, 150 km S Kasempa, 11.XI.2002, leg. F. Wachtel, 1 ex. CRG. – Zimbabwe, 60 km N Bulawayo, Maraposa Road, 3.XII.1998, leg. M. Snižek, 1 ex. ZSM. – Botswana, 10 km N Martin’s Drift, 7.I.2010, leg. P. Schüle, 1 ex. SMNS. – Angola, Sá da Bandeira, 2.X.1949, leg. B. Malkin, 1 ex. CRA. – Angola, Huambo Prov., 75 km N Caconda near Cuima, 10.–11.XI.2011, leg. P. Schüle, 1 ex. SMNS. – South Africa, Limpopo, Manyeleti Game Reserve, 17.–19.XI.1987, leg. T. van Viegen, 2 ex. TMSA. – South Africa, Limpopo, Naboomspruit, Torino Ranche, 15.I.1990, leg. S. Endrödy-Younga, 1 ex. TMSA. – South Africa, Limpopo, Kruger NP, Skukuza Research Camp, 1.–16.XII.2010, leg. J. Harrison, 1 ex. TMSA. – South Africa, Limpopo, Amatola, Scott Farm, 26.I.1998, leg. R. Müller, 1 ex. TMSA. – South Africa, Limpopo, Thabazimbi, 16.XI.2002, leg. F. Wachtel, 4 ex. CRG. – South Africa, Limpopo, N Makopane (Potgietersrus), Thabaphaspha Farm, 1400 m, 13.–14.XII.2003, leg. R. Müller & W. Schawaller, 1 ex. SMNS, 1 ex. TMSA. – South Africa, Limpopo, Mapungubwe, Little Muck NR, 500 m, 6.–9.XII.2008, leg. W. Schawaller, 1 ex. SMNS. – South Africa, Limpopo, 10 km N Modimolle (Nylstroom), Kuthaba Bush Lodge, 1300 m,

10.–13.XII.2008, leg. W. Schawaller, 2 ex. SMNS. – South Africa, Limpopo, Waterberg, Geelhoutbosch Farm, 15.XII.1997, leg. C. L. Bellamy, 1 ex. TMSA. – South Africa, Limpopo, 15 km NE Klaserie, Guernsey Farm, 18.–30.XII.1985, leg. S. & J. Peck, 1 ex. TMSA. – South Africa, Mpumalanga, Booysendal Farm, 25.X.2000, leg. TMSA staff, 1 ex. TMSA. – South Africa, Gauteng, Tswaing, 17.II.2003, leg. TMSA staff, 1 ex. TMSA. – South Africa, Free State, Bothaville, 15.II.1898, leg. H. Brauns, 5 ex. TMSA. – South Africa, KwaZulu-Natal, SW Magudu, 4.–5.I.2009, leg. P. Schüle, 3 ex. SMNS.

Type locality. “Marseille, importée” (*viator*), “Abyssinie” (*rufula*).

Remarks. We could not clear, if *rufula* Fairmaire, 1883 is a synonym of *viator* Mulsant & Godart, 1868 (as listed in all catalogues), or of *hobohmi* Koch, 1953 (with *rufus* Ardoïn, 1976, syn. n.). In some localities (for example Modimolle and Magudu) *A. viator* was collected together with *A. hobohmi*.

Distribution. Tropical and southern Africa, the holotype was imported to Marseille in southern France (Mulsant and Godart 1868).

Key to the species of African *Alphitobius*

Unfortunately, the taxonomic status of *Alphitobius grandis* Fairmaire, 1897 and *Alphitobius limbalis* Fairmaire, 1901 from Madagascar could not be enlightened by the authors, thus both taxa are not included herein. Also not included is *Alphitobius niger* Ferrer, 1983, which was overlooked during the study and included herein only during the review process. Compare also Figs 1–17.

- | | | |
|---|--|-------------------------------|
| 1 | Genal canthus not distinctly projecting outwards beyond contours of eyes.... | 2 |
| – | Genal canthus projecting outwards beyond contours of eyes..... | 5 |
| 2 | Body length 8.8 mm, pronotum widest in posterior third... <i>capitaneus</i> sp. n. | |
| – | Body length ≤ 7.0 mm, pronotum widest near posterior angles | 3 |
| 3 | Lateral margins of pronotum distinctly rounded towards anterior angles (Fig. 2) | <i>lamottei</i> |
| – | Lateral margins of pronotum nearly straight or slightly sinuate narrowing towards anterior angles, thus shape of pronotum conical (Figs 4, 5)..... | 4 |
| 4 | Lateral margins of pronotum nearly straight, pronotal disc with punctures of similar size | <i>arnoldi</i> nom. n. |
| – | Lateral margins of pronotum slightly sinuate, pronotal disc with large and small punctures of different size | <i>hobohmi</i> |
| 5 | Lateral margins of pronotum rounded towards posterior angles, pronotum widest in the middle or shortly behind the middle..... | 6 |
| – | Lateral margins of pronotum subparallel, pronotum widest near base..... | 10 |
| 6 | Elytra without distinct punctural rows, only laterally with traces of punctural rows, elytra with fine microsetation..... | <i>acutangulus</i> |
| – | Elytra completely with distinct punctural rows, elytra bare or with fine microsetation | 7 |

- 7 All elytral intervals distinctly convex, nearly keel-like (Figs 7, 9), elytra with fine microsetation **8**
- All elytral intervals flat or only external intervals slightly convex, but not keel-like, elytra bare..... **9**
- 8 Body length 3–4 mm, apicale of aedeagus with rounded tip (Fig. 25).. ***kochi***
- Body length above 5 mm, apicale of aedeagus with triangular acute tip (Fig. 3) ***rugosulus***
- 9 Internal punctural rows of elytra not impressed, last 5 antennomeres forming a separated club ***laevigatus***
- All punctural rows of elytra impressed, last 5 antennomeres not separated from the remaining basal ones ***crenatus***
- 10 Elytra long and narrow, parallel-sided (Figs 10, 11)..... **11**
- Elytra shorter and broader, ovate (Figs 6, 8, 13, 15) **12**
- 11 Lateral margins of pronotum regularly rounded, anterior corners not prominent, apicale of aedeagus with rounded tip (Fig. 28)..... ***lucasorum***
- Lateral margins of pronotum parallel in basal part, anterior corners prominent, apicale of aedeagus triangular with acute tip (Fig. 29) ***parallelipennis***
- 12 Lateral margins of pronotum straight and parallel in basal part, pronotum widest near base **13**
- Lateral margins of pronotum rounded towards posterior angles, pronotum widest in middle **14**
- 13 Dorsal side blackish and shining, base of pronotum unbordered in the middle, apicale of aedeagus shorter (Fig. 22) ***diaperinus***
- Dorsal side brownish and dull, base of pronotum completely bordered, apicale of aedeagus longer (Fig. 31) ***viator***
- 14 Pronotum convex with rough and confluent punctuation, without slight transverse impression (Fig. 13)..... ***karooensis***
- Pronotum more flat and with finer separate punctuation, with a feeble transverse impression (Fig. 6) ***leleupi***

New combinations

***Ulomoides basilewskyi* (Ardoin, 1969), comb. n.**

http://species-id.net/wiki/Ulomoides_basilewskyi

Figs 3, 32

Alphitobius basilewskyi Ardoin, 1969

Type specimens examined. Ivory Coast, Bingerville, VI.1962, leg. J. Decelle, male holotype MRAC. – Same locality and collector as holotype, but IV.1962–III.1963, 3 paratypes MRAC.

Type locality. “Bingerville”.

Remarks. *Ulomoides basilewskyi* (Ardoïn, 1969) possesses distinctly crenulated outer margin of all tibiae (see Ardoïn 1969), which is characteristic for some species of *Ulomoides* Blackburn, 1888 (Hinton 1947, under *Martianus* Fairmaire, 1893), but not for *Alphitobius*. In the structure of tibiae, the shape of body, eyes, and antennae *U. basilewskyi* resembles *U. dermestoides* (Chevrolat, 1878). The striking long apicale of the aedeagus (Fig. 32) resembles those of some *Ulomoides*, but differs distinctly from those of the *Alphitobius* species (Figs 18–31).

Distribution. Ivory Coast.

***Peltoides (Micropeltoides) opacus* (Gerstaecker, 1871), comb. n.**
http://species-id.net/wiki/Peltoides_opacus

Alphitobius opacus Gerstaecker, 1871

Diaclina opaca (Gerstaecker, 1871) sensu Gebien (1940)

Peltoides (Micropeltoides) crypticoides Pic, 1916, syn. n.

Type specimens examined. Ugano, leg. v. d. Decken, no. 56752, no further data, holotype of *opacus* MNB. – Fort Crampel, no further data, holotype of *crypticoides* MNHN.

New material. Benin, Kokora, 52 km N Save, 21.VI.2001, leg. F. & L. Kantner, 1 ex. SMNS. – Uganda, Bwamba Forest, 2500 ft. (760 m), III.1948, leg. J. G. Williams, 1 ex. SMNS. – Angola, Huila Province, 20 km S Caluquembe, 6.–7.XI.2011, leg. P. Schüle, 1 ex. SMNS. – Guinea (labelled as French Guinea), Region Kindia, Séguéia, 10.V.1951, leg. J. Bechyné, 4 ex. NHMB, 1 ex. CRG. – SE Cameroon, Lolodorf, leg. L. Conradt, 1895, 1 ex. NHMB. – Tanzania (labelled as Deutsch Ostafrika), [residual label unreadable], 1 ex. NHMB. – Zambia, Ikengele, Nchila Reserve, 6.XI.2002, leg. F. Wachtel, 1 ex. CRG.

Type localities. “Ugano-Berge” (*opacus*), “Fort Crampel (Kaga Bandora)” (*crypticoides*).

Remarks. The examination of the type of *Alphitobius opacus* Gerstaecker, 1871 shows, that the original assignment to *Alphitobius* is wrong and that this species must be transferred to the genus *Peltoides* Laporte, 1832, subgenus *Micropeltoides* Pic, 1916, because of entirely different body shape, different shape of antennomeres, and different shape of male genitalia with the base of basale not asymmetrical as in *Alphitobiini*. The type of *Peltoides (Micropeltoides) crypticoides* Pic, 1916 fully coincide with *opacus*, and is thus a junior synonym.

Distribution. Tanzania (type locality *opacus*), Central African Republic (type locality of *crypticoides*); Senegal (Ardoïn 1963b), Ivory Coast (Ardoïn 1969), Mali, The Gambia (Grimm 2002, all under *P. (M.) crypticoides*); Benin, Cameroon, Guinea, Uganda, Angola, Zambia (new records).

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References

- Ardoïn P (1958) Nouvelles espèces africaines de Ténébrionides (Col.). Bulletin de la Société entomologique de France 63: 17–31.
- Ardoïn P (1963a) La réserve naturelle intégrale du Mont Nimba. VII. Coleoptera Tenebrionidae (Troisième note). Mémoires de l'Institut français d'Afrique noire 66: 221–267.
- Ardoïn P (1963b) Contribution à l'étude de la faune de la basse Casamance (Sénégal) VI. Bulletin de l'Institut français d'Afrique noire (A) 25: 1374–1387.
- Ardoïn P (1969) Contribution à la connaissance de la faune entomologique de la Côte-d'Ivoire (J. Decelle, 1961–1964). XXXVII. Coleoptera Tenebrionidae. Annales du Musée royal de l'Afrique centrale (série Zoologie) 175: 139–285, pls. I–XI.
- Ardoïn P (1976) Mission entomologique du Musée Royal de l'Afrique Central aux Monts Uluguru, Tanzanie (L. Berger, N. Leleup et J. Debecker, V–VIII.1971), 20. Coleoptera Tenebrionidae. Revue de Zoologie africaine 90: 723–768, pls. VII–X.
- Bremer HJ (1985) Eine neue *Alphonse*-Art (Coleoptera. Tenebrionidae, Ulomini). Entomologische Blätter 81: 62–66.
- Bremer HJ, Girard C (1996) L'Entomofaune des Termitières mortes de *Macrotermes*. Occurrence of *Alphonse lamottei* Ardoïn in the chamber of dead termitaries (Coleoptera, Tenebrionidae, Alphonseini). Revue française d'Entomologie (NS) 18: 135–137.
- Fairmaire L (1897) Matériaux pour la faune coléoptérique de la région malgache, 3e note. Annales de la Société Entomologique de Belgique 41: 92–119.
- Fairmaire L (1901) Matériaux pour la faune coléoptérique de la région malgache, 11e note. Revue d'Entomologie 20: 101–248.
- Ferrer J (1983) Seven new species of Tenebrionidae from the Old World (Coleoptera). Entomologica scandinavica 14: 137–144. doi: 10.1163/187631283X00029
- Ferrer J (2004) Tenebrionidae (Coleoptera) de Namibia, avec descriptions de 12 espèces nouvelles. Mitteilungen aus dem Museum für Naturkunde Berlin, Zoologische Reihe 80: 181–250. doi: 10.1002/mmzn.20040800204
- Gebien H (1921) Die Tenebrioniden Westafrikas. Archiv für Naturgeschichte 86 (1920): 1–256.
- Gebien H (1940) Katalog der Tenebrioniden. Teil II. Mitteilungen der Münchener Entomologischen Gesellschaft 30: 1061–1092.
- Grimm R (2002) Tenebrionidae von Gambia (Insecta, Coleoptera). Entomofauna 23: 353–380.

- Hinton HE (1947) On some new and little-known Indo-Australian Diaperini (Coleoptera, Tenebrionidae). The Annals and Magazine of natural History 14: 81–98.
- Koch C (1953) The Tenebrionidae of Southern Africa. III. Tenebrionidae from a nest of *Tatera*. Revue de Zoologie et de Botanique Africaines 47: 1–30.
- Matthews EG, Bouchard P (2008) Tenebrionid beetles of Australia. Descriptions of tribes. keys to genera. catalogue of species. Australian Biological Resources Study, Canberra, 398 pp.
- Mulsant E, Godart A (1868) Description de deux espèces nouvelles d'*Alphitobius* (Coléoptères de la tribu des Latigenes, famille des Ulomiens). Annales de la Société Linnéenne de Lyon 16: 288–291.